Agave Letonae marginata, var. nov.

Differing from the type in having the leaves rather broadly bordered with bright yellow.

Hacienda El Platanar, San Miguel, El Salvador (*Calderón* 2081; type, sheets 1169878-9 in the U. S. National Herbarium).

Agave lempana, sp. nov.

(TEQUILANAE.) Acaulescent. Leaves prickly only at base, oblong-lanceolate, nearly flat, grayish or slightly glaucous, large (15 × 120 cm. or more); spine chestnut-colored, glossy upward, somewhat low-granular on the back below, broadly conical, pitted and round-grooved below the middle, the margin acutely decurrent for several times its length, somewhat intruded into the green tissue, about 6 × 20 mm.; teeth confined to the lower third of the leaf, glossy garnet- or chestnut-colored, 10–15 or 20 mm. apart, straight or upcurved or recurved, narrowly triangular from lenticular bases 2–4 mm. wide, the intervening green margin nearly straight. Inflorescence unknown.

El Salvador. Planted (?) at the railroad station on the Lempa River (F. W. Taylor, February 15, 1924). Type in the herbarium of the University of Illinois.

Agave parvidentata, sp. nov.

(GUATEMALENSES.) Acaulescent; not cespitose (?). Leaves slightly glaucescent, oblanceolate-oblong, acute, smooth, 15 × 100 cm. or more; spine brown, apparently conical, somewhat intruded into the green tissue and decurrent, 5 mm. thick; teeth dull brown, 10–25 mm. apart, thick, firm, small (scarcely 2 mm. long), from abrupt lenticular bases 3–5 mm. wide, the intervening margin somewhat concave. Inflorescence paniculate, apparently with short branches and closely bunched flowers; pedicels moderate (2 × 15 mm.). Flowers orange, 40–50 mm. long; ovary 20–30 mm. long, equaling or surpassing the perianth, oblong; tube conical, scarcely 5 mm. deep; segments 15 mm. long, shorter than the ovary; filaments inserted nearly in the throat, about 30 mm. long. Capsules unknown, and not known to be bulbiferous.

Cultivated in San Salvador, El Salvador (*Calderón* 2085, in 1924; type, sheets 1169884-5, in the U. S. National Herbarium), under the name "maguey."

ENTOMOLOGY.—*New termites from the Solomon Islands and Santa Cruz Archipelago.* THOS. E. SNYDER, Bureau of Entomology.

Dr. W. M. Mann visited Fiji in 1915 and the Solomon Islands and Santa Cruz Archipelago in the South Pacific Ocean in 1916. On these islands in Oceania he collected fourteen species of termites, representing seven genera or subgenera and three families; all of these species are apparently new to science. They were carefully compared with descriptions of known termites from the Ethiopian, Oriental, and Australian regions. Often, however, the descriptions and illustrations of known species are not as adequate as is necessary, without

specimens for comparison. Careful measurements and camera lucida illustrations accompany the descriptions of the new species, where special characters are to be noted.

No mound-building, fungus-growing termites of the *Termes* group were found, although they occur in this general region. Species of the family Rhinotermitidae were well represented in the Solomon Islands and Santa Cruz. Species of *Nasutitermes* (sens. lat.) are more or less restricted to certain islands, as in the West Indies.

These termites found by Doctor Mann are the first and only specimens ever reported as having been collected on these islands in the South Seas. The specimens were deposited in the Museum of Comparative Zoology at Cambridge, Mass., and were lent to the writer for study through the kindness of Dr. S. Henshaw and Mr. Nathan Banks. All types have been returned to the Museum of Comparative Zoology, but where there was sufficient material, paratypes were retained for the collection of the United States National Museum; no definite holotype has been designated.

The termites of the Solomon Islands and Santa Cruz Archipelago apparently represent isolated, distinct, old, island fauna of Melanesia. The closest relations are apparently with the Malay Peninsular and there are indications of continuation of the fauna of Papua to these islands. It is, however, difficult to draw definite conclusions from this small series of termites alone.

One new species in the family Kalotermitidae and eight in the family Rhinotermitidae are described herewith; five new termites in the family Termitidae will be described in a subsequent paper, as part II.

Family *KALOTERMITIDAE*

Genus *Kalotermes* Hagen

Subgenus *Neotermes* Holmgren

The subgenus *Neotermes* is closely related to *Kalotermes*. The numerous species are widely distributed throughout the world, from the subtropics of southern Florida to the tropics of South America and New Zealand, as well as throughout the tropics of the Eastern Hemisphere. Species of *Neotermes* are forest-inhabiting and are greatly dependent upon moisture for life; they are wood-boring and do not burrow in earth.

Neotermes sanctae-crucis, new species

Winged adult.—Head light castaneous (reddish brown), broadly oval (with mandibles), or quadrate, rounded posteriorly, with a few scattered, long hairs. Compound eyes black, not round, projecting, separated from lateral margin of head by a distance nearly equal to long diameter of eye. Ocelli hyaline, suboval, slightly projecting, at an oblique angle to and nearly

touching eyes. Labrum yellow-brown, tongue-shaped, broader than long, slightly shallowly concave at apex, with long hairs.

Antenna light yellow-brown, with 20–21 segments; segments broadest at middle, narrowed near base and apex, with long hairs; third segment subclavate, longer than second or fourth segments; segments becoming longer towards apex; last segment narrow, elongate and semielliptical.

Pronotum about same color as head, broader than head, broadest at middle, not twice as broad as long, broadly, deeply, and roundly emarginate anteriorly, shallowly and roundly emarginate posteriorly, the sides round to posterior margin, with fairly numerous, long hairs.

Wings grayish, with tinge of yellow, costal area yellow-brown; membrane reticulate or finely punctate; in fore wing, subcosta approximately reaching basal third of wing, radius extending for approximately two-thirds of wing, radius sector with 4 long sub-branches to costa and shorter sub-branches near apex; median close to and parallel to radius sector and reaching apex of wing; short transverse branches to radius sector near apex; cubitus running slightly below middle of wing, not reaching apex, with about 15 or 16 branches or sub-branches to lower margin, those nearer the base (the first) the most distinct. Wing scale as long as pronotum. In hind wing, subcosta rudimentary; radius joining the costa beyond middle of wing; radius sector parallel to costa and reaching apex of wing, with fewer branches than in fore wing; median originating from radius sector not far from base of wing (approximately 2.75 mm.); cubitus nearer to middle of wing than in fore wing; indications of rudimentary anals.

Legs yellow, tibia darker; pulvillus present, with long hairs.

Abdomen about same color as head; tergites with two transverse rows of long hairs; cerci and styli present, the cerci not elongate.

Measurements.—Length of entire winged adults (males and females), 18–19 mm.; length of entire deälated adults, 11–12 mm.; length of head (to tip of labrum), 2.8 mm.; length of head (to anterior margin), 2.1 mm.; length of pronotum, 1.8 mm.; length of hind tibia, 2.2 mm.; length of anterior wing, 13.5 mm.; diameter of eye (long diam.), 0.55 mm.; width at head (of eyes), 2.25 mm.; width of pronotum, 3 mm.; width of anterior wing, 4.8 mm.

Fig. 1.—*Kalotermes* (*Neotermes*) *sanctae-crucis* Snyder. Soldier. View of mandibles to show marginal teeth.

Soldier.—Head light castaneous (light reddish-brown), darker anteriorly, quadrate or broadly oval, longer than broad, broadest posteriorly, rounded posteriorly, convex dorsally, shallow depression at epicranial suture on front slope of head, with scattered, long hairs. Eye spot hyaline, suboval at right angle to margin of head. Gula very narrow at middle, width nearly one-third that anteriorly.

Mandibles black, reddish-brown at base, stout, incurved at apex, where sharp-pointed; left mandible with two pointed, marginal teeth near apex, a smaller tooth and a molar near middle, and a pointed tooth at base; right mandible with two marginal, broad, pointed teeth at about middle, its edge roughened. (Fig. 1.)

Labrum light yellow, broad, broader than long, broadly pointed at apex, with long hairs.

Antenna yellow-brown, with 16–18 segments, segments becoming longer and broader toward apex, with long hairs; where there are 18 segments, third segment subclavate, longer than second or fourth segments; fourth shorter than second segment; last segment narrow, shorter and subelliptical.

Pronotum dirty white tinged with yellow, roundly and shallowly emarginate anteriorly, convex posteriorly, twice as broad as long, broadest at middle, not as broad as head; sides round to posterior margin, with scattered long hairs.

Legs yellowish, tibiae darker, femora not markedly swollen, with long hairs.

Abdomen dirty white tinged with yellow tergites with two transverse rows of fairly long hairs; cerci and styli fairly elongate and prominent.

Measurements.—Length of entire soldier, 13–13.5 mm.; length of head with mandibles, 5.7 mm.; length of head without mandibles (to anterior), 3.7 mm.; length of left mandible, 2.1 mm.; length of pronotum 1.5–1.6 mm.; length of hind tibia: 2.4 mm.; width of head anteriorly (back of antennae), 3.3 mm.; width of head (posteriorly), 3.5 mm.; width of pronotum, 2.9–3 mm.

Type locality.—Graciosa Bay, Santa Cruz Archipelago.

Described from a series of winged adults collected with soldiers and nymphs at the type locality by Dr. W. M. Mann, in July, 1916. Winged adults and soldiers were also collected by Mann on Santa Anna Island, Solomon Islands, in August, 1916.

Type, winged adult.—Cat. No. 15284, Museum of Comparative Zoology, Cambridge, Mass.; morphotype, soldier; paratypes in U. S. National Museum and with Hill in Australia.

Family *RHINOTERMITIDAE*

Genus *Prorhinotermes* Silvestri

The genus *Prorhinotermes* was established in 1909 by Silvestri for the species *inopinatus* from Samoa. Only eleven described species are included, and these occur on islands from southern Florida to Central and South America, in Formosa, the Philippine Islands, Samoa, Krakatoa, Ceylon, Madagascar, and the Seychelles. Several species are found in localities south of the equator and all of the species are confined to the tropics or subtropics. *Prorhinotermes* is an island genus.

Prorhinotermes manni Snyder from Santa Cruz Archipelago and *P. solomonensis* Snyder from the Solomon Islands are two new species from the South Seas, making a total of thirteen species for the genus, all of which are in general more or less closely related.

Species of *Prorhinotermes* are wood-boring in habit and burrow through the hardest woods; their colonies are located in moist logs, stumps, and dead trees; they do not burrow in the earth. In southern Florida *P. simplex* Hagen occurs on keys, at Miami Beach, and on the mainland near Homestead—the only known record of any *Prorhinotermes* occurring on the mainland.

Prof. S. F. Light has shown from his study of two species of *Prorhinotermes*, both taken from the Island of Luzon in the Philippines, that they are very different; also *P. manni* and *P. solomonensis* from Santa Cruz Archipelago and the Solomon Islands are quite distinct, although oddly from closely adjacent islands. Hence it is quite possible that a more thorough study of *P. simplex* Hagen occurring in southern Florida and islands of the West Indies will show that more than one species is involved, instead of a single, variable, widely distributed species.

Large numbers of apterous reproductive forms occur in the colonies of species of *Prorhinotermes* and all of these species, as has already been noted, occur on islands; it seems probable that the species of this genus are dispersed in driftwood and that the winged adults do not play an important part in geographical distribution of this group.

Prorhinotermes manni, new species

Soldier.—Head yellowish, much broader posteriorly than anteriorly, narrowed and markedly tapering anteriorly, with few scattered long hairs arranged in several transverse rows; fontanelle hyaline, a round, distinct spot, situated on a line connecting the front of the eyes; a fairly distinct groove from fontanelle to anterior margin.

Eye spot hyaline, large, suboval, and convex (slightly projecting). Labrum tongue-shaped about as long as broad, with two long hairs at apex. Gula relatively broad at middle.

Mandibles reddish-brown, except at base, where yellow-brown, slender and elongate.

Antenna yellow, elongate, with 16–18 segments, with very long hairs; segments becoming longer and broader towards apex; third segment subclavate and usually longer than second; fourth segment shorter than third, almost as long as second segment; last segment narrow, elongate, and subelliptical.

Maxillary palpi very elongate, nearly as long as mandibles.

Pronotum yellow, not twice as broad as long, broadest anteriorly; anterior margin markedly emarginate, somewhat arched; sides roundly taper posteriorly; posterior margin slightly convex (nearly a straight line), with scattered long hairs.

Mesonotum only slightly broader than pronotum.

Legs whitish with tinge of yellow, elongate and slender, with short and long hairs.

Abdomen yellowish; tergites with a row of long hairs at the base of each, also short hairs. Cerci elongate; styli present.

Measurements.—Length of entire soldier, 5.5 mm.; length of head with mandibles, 2.8 mm.; length of head without mandibles (to anterior), 1.6 mm.; length of left mandible, 1.2 mm.; length of pronotum, 0.65–0.7 mm.; length of hind tibia, 1.25 mm.; width of head posteriorly, 1.4 mm.; width of head anteriorly, 0.95 mm.; height of head (at middle), 0.9 mm.; width of pronotum, 1.2 mm.

Winged adult unknown.

Type locality.—Graciosa Bay, Santa Cruz Archipelago.

Described from a series of soldiers collected with workers, also winged adults of *Nasutitermes* (*Subulitermes*) *sanctae-crucis* Snyder at the type locality by Dr. W. M. Mann in July, 1916.

Type, soldier.—Cat. No. 15285, Museum of Comparative Zoology, Cambridge, Mass.; paratype in the U. S. National Museum.

Prorhinotermes manni is darker colored and larger, and has more segments to the antenna than *P. krakataui* Holmgren, from Krakatoa. The head is longer than in *P. inopinatus* Silvestri, of Samoa, and is smaller than in either *canalifrons* Sjöstedt, of Madagascar, or *luzonensis* Light, from the Philippines. The antenna has more segments than *gracilis* Light, from the Philippines,

and fewer than *flavus* Bugnion & Popoff of Ceylon, and the pronotum also is of different shape. *P. manni* has also more segments to the antenna, is larger, and has a more tapering head and larger pronotum than *solomonensis* Snyder from the Solomon Islands. It is smaller than *japonicus* Holmgren, from Formosa, and is probably closest to *inopinatus* from Samoa.

Prorhinotermes solomonensis new species.

Soldier.—Head yellowish, flat, while broader posteriorly than anteriorly, more or less oval (not so tapering as in *manni* Snyder, from Santa Cruz Island) with few scattered long hairs arranged in several transverse rows; fontanelle a hyaline, round, distinct spot, situated posteriorly to a line connecting the front of the eyes, with a fairly distinct groove from fontanelle to anterior margin.

Eye spot hyaline, large, suboval, and convex (slightly projecting). Labrum tongue-shaped, slightly longer than broad (but not as broad as in *manni*), with two long hairs at apex. Gula relatively broad at middle.

Mandibles reddish-brown except at base where yellow-brown, slender (more slender than in *manni*) and elongate.

Antenna yellow, with 14 or 15 segments; segments with very long hairs, becoming longer and broader towards apex; third segment subclavate, usually much longer than second or fourth; fourth segment shorter than second; last segment slender and subelliptical.

Maxillary palpi very long and slender, as long as the mandibles.

Pronotum yellow, broadest anteriorly, nearly twice as broad as long (not as long as in *manni*); anterior margin less deeply emarginate anteriorly than in *manni*, roundly narrowing posteriorly; posterior margin nearly a straight line (slightly convex); scattered long hairs present.

Mesonotum broader than pronotum.

Legs tinged with yellow, elongate and slender, with short and long hairs.

Abdomen yellow; tergites with a row of long hairs at the base of each, also short hairs. Cerci elongate; styli present.

Measurements.—Length of entire soldier, 5.25–5.5 mm.; length of head with mandibles, 2.5–2.6 mm.; length of head without mandibles (to anterior), 1.5 mm.; length of left mandible, 1.15 mm.; length of pronotum, 0.5–0.6 mm.; length of hind tibia, 1.2 mm.; width of head posteriorly, 1.25–1.35 mm.; width of head anteriorly, 0.95 mm.; height of head (at middle), 0.8 mm.; width of pronotum, 1–1.1 mm.

Head of soldier more oval and less markedly tapering than in most species of *Prorhinotermes*.

Winged adult unknown.

Type locality.—Auki, Malayta Island, Solomon Islands.

Described from a series of soldiers collected with workers at the type locality by Dr. W. M. Mann, in May and June, 1916, with minor soldiers of *Rhinotermes* (*Schedorhinotermes*) *solomonensis* Snyder and soldiers of *Coptotermes solomonensis* Snyder.

Type, soldier.—Cat. No. 15286, Museum of Comparative Zoology, Cambridge, Mass.; paratype in the U. S. National Museum.

Prorhinotermes solomonensis has a more oval, less markedly tapering head than *manni* Snyder from Santa Cruz Archipelago; is darker colored and larger, and has more segments to the antenna than *krakataui* Holmgren, from Krakatoa; is smaller and has fewer antennal segments than *inopinatus*

Silvestri, of Samoa; is smaller than *canalifrons* Sjöstedt, from Madagascar, or *luzonensis* Light, of the Philippines; and is smaller than *japonicus* Holmgren from Formosa. The antenna has fewer segments than *gracilis* Light, from the Philippines, or *flavus* Bugnion & Popoff, from Ceylon. *P. ponapiensis* Oshima, from Ponape Island in the Caroline Islands, is known from the winged adult only.

Genus *Coptotermes* Wasmann

Coptotermes was established in 1896 by Wasmann as a subgenus for *Termes gestroi* Wasmann from Burma. In 1902 he described the genus *Arrhinotermes* for the new species *heimi* from Ceylon, based on adults only. *A. heimi* is a *Coptotermes* and, being the type of *Arrhinotermes*, *Arrhinotermes* becomes a synonym. Banks in 1920 replaces *Arrhinotermes* by *Prorhinotermes*, described by Silvestri in 1909.

Coptotermes includes approximately thirty-five valid species, widely distributed throughout the tropics of the world. Some of the most injurious termites to both woodwork and living trees are contained therein.

A viscous milky fluid is secreted from the short tubular frontal gland situated at the anterior margin of the head; this secretion dissolves lime mortar.

Coptotermes grandiceps, new species

Soldier.—Head yellow-brown to light castaneous, area of frontal gland distinct, lighter colored, and arched; head markedly longer than broad, broadest posteriorly, narrowed anteriorly (sides of head more straightly than roundly tapering); posterior margin rounded; hairs fairly numerous, scattered, long. Eye spot visible, not distinct. Frontal tube light castaneous, fairly long, and prominent. Gula at middle more than half as broad as the greatest anterior width. Mandibles reddish brown, yellow-brown at base, sabre-shaped, broad at base but narrowed and incurved at sharp, pointed apex; left mandible with 3 or 4 fairly distinct marginal teeth at base; right with a narrow, sharp, pointed marginal tooth.

Labrum light castaneous, elongate, subtriangular, sharply pointed at apex where hyaline and constricted, two long hairs at apex.

Antenna light yellow-brown, with 16 segments; segments becoming longer and broader towards apex, with long hairs; third segment ring-like, shorter than second or fourth segments; fourth shorter than second segment; last segment narrow, elongate, and subelliptical.

Pronotum tinged light yellow, twice as broad as long, deeply and roundly emarginate anteriorly, shallowly emarginate posteriorly; sides angularly narrow to posterior margin; hairs numerous, scattered, long.

Legs with tinge of yellow, slender, elongate, with long hairs.

Abdomen dirty white, with tinge of light yellow; tergites with numerous, scattered, long, golden hairs, apparently *not* arranged in transverse rows, but if so, falling in Holmgren's key with the posterior row longest and most prominent; cerci and styli prominent.

Measurements.—Length of entire soldier, 5.25–5.5 mm.; length of head with mandibles, 2.7 mm.; length of head without mandibles (to anterior), 1.7 mm.; length of left mandible, 1 mm.; length of pronotum, 0.5 mm.; length of hind tibia, 1.3 mm.; width of head posteriorly, 1.4–1.5 mm.; width of head anteriorly, 0.9–0.95 mm.; width of pronotum, 1 mm.

Type locality.—Tulagi Island, Solomon Islands.

Described from a series of soldiers collected with workers at the type locality by Dr. W. M. Mann, in May, 1916.

Type, soldier.—Cat. No. 15287, Museum of Comparative Zoology, Cambridge, Mass.; paratype, U. S. National Museum.

Some species of *Coptotermes* are known only from the winged adult and cannot be used in comparison, but the soldier of *C. grandiceps* appears to be distinct; the large head, somewhat straight sides of the head, and number of antennal segments are distinguishing characters.

Coptotermes pamuae, new species

Soldier.—Head yellow-brown to light castaneous, area of frontal gland lighter colored and arched, sides of head lighter; head longer than broad, broadest posteriorly, narrowed anteriorly, the sides roundly tapering; posterior margin of head rounded; hairs scattered and long. Frontal tube light castaneous, darker on rim of opening, fairly long and prominent. Eye spot not distinct. Gula at middle more than half as broad as where broadest anteriorly.

Mandibles light castaneous at base, reddish brown, sabre-shaped, broad at base but narrowed and incurved at apex where pointed; left mandible with slight indications of several marginal teeth at base; right with no marginal teeth.

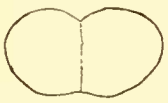

Fig. 2.—*Coptotermes pamuae* Snyder. Soldier. View of pronotum to show marked emargination.

Labrum light castaneous, subtriangular, sharply pointed at apex where slightly hyaline and constricted; two long hairs at apex.

Antenna tinged with yellow, with 14 segments; segments becoming longer and broader towards apex, with long hairs; third segment subclavate, usually approximately subequal with second and fourth segments, variable, last segment elongate, slender, subelliptical.

Pronotum tinged with yellow, not twice as broad as long, deeply and roundly emarginate anteriorly; sides of anterior margin high before median emargination, roundly sloping posteriorly; posterior margin shallowly concave at middle, with long hairs.

Legs tinged with yellow, slender, elongate, with long hairs.

Abdomen tinged with yellow; tergites with dense long hairs, the posterior row longest; cerci and styli prominent.

Measurements.—Length of entire soldier, 4–4.3 mm.; length of head with mandibles, 2 to 2.1 mm.; length of head without mandibles (to anterior) 1.35 mm.; length of left mandible, 0.77 mm.; length of pronotum, 0.45 mm.; length of hind tibia, 0.9 mm.; width of head posteriorly (where widest), 1.15–1.2 mm.; width of head anteriorly, 0.7 mm.; height of head at middle, 0.9 mm.; width of pronotum, 0.75 mm.

Type locality.—Pamua, San Cristobal Island, Solomon Islands.

Described from a series of soldiers collected by Dr. W. M. Mann with workers and *Rhinotermes (Schedorhinotermes) solomonensis* Snyder at the type locality in August, 1916.

Type, soldier.—Cat. No. 15288, Museum of Comparative Zoology, Cambridge, Mass.; paratypes in U. S. National Museum.

Coptotermes pamuae is a small species, but is larger than *C. parvulus* Holmgren, from India; it is close to *C. travians* Haviland, from the Malay

Peninsula and Borneo, but has a longer pronotum which is also deeply emarginate anteriorly. (Fig. 2.)

Coptotermes solomonensis, new species

Soldier.—Head light yellow, area of frontal gland distinct, lighter colored and arched, markedly longer than broad, broadest posteriorly, narrowed anteriorly (sides of head more straightly than roundly tapering); posterior margin of head rounded; hairs fairly numerous, scattered, long. Eye spot indistinct. Frontal tube light castaneous, fairly long. Gula broad in middle, more than half as broad as where broadest anteriorly. Mandibles reddish brown, yellow-brown at base, sabre-shaped, broad at base but narrowed and incurved at sharp pointed apex; left mandible with 3 or 4 more or less broad marginal teeth at base.

Labrum light castaneous, elongate, subtriangular, sharply pointed at apex, where hyaline and constricted; two long hairs at apex.

Antenna yellow, with 15 segments; segments become longer and broader towards apex, with long hairs; third segment short and ring-like, shorter than second or fourth segments; fourth segment shorter than second; last segment narrow and subelliptical.

Pronotum tinged with yellow (margins darker), not quite twice as broad as long, deeply and roundly emarginate anteriorly, shallowly emarginate posteriorly; sides angularly narrow to posterior margin; hairs numerous, scattered, long.

Legs with tinge of yellow, slender, elongate, with long hairs.

Abdomen dirty white, with tinge of light yellow; tergites with numerous long, golden hairs, apparently *not* arranged in regular transverse rows, but if so, running in Holmgren's key with the posterior row longest and most prominent; cerci and styli prominent.

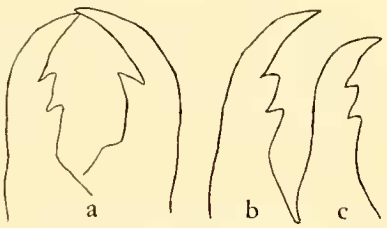

Fig. 3.—Contrasting views of the mandibles of major soldiers of new *Schedorhinotermes* to show marginal teeth on left mandible.

(a) *Rhinotermes* (*S.*) *marjoriae* Snyder, both left and right mandibles. (b) *Rhinotermes* (*S.*) *sanctae-crucis* Snyder. (c) *Rhinotermes* (*S.*) *solomonensis* Snyder.

Measurements.—Length of entire soldier, 6.5 mm.; length of head with mandibles, 3 mm.; length of head without mandibles (to anterior), 1.8 mm.; length of left mandible, 1.2 mm.; length of pronotum, 0.6 mm.; length of hind tibia, 1.25 mm.; width of head (posteriorly), 1.45 mm.; width of head (anteriorly), 0.95 mm.; width of pronotum: 1 mm.

Type locality.—Auki, Malayta Island, Solomon Islands.

Described from a single soldier, collected with workers, together with soldiers and workers of *Prorhinotermes solomonensis* Snyder and minor soldiers of *Rhinotermes* (*Schedorhinotermes*) *solomonensis* Snyder at the type locality, in May and June, 1916, by Dr. W. M. Mann.

Type, soldier.—Cat. No. 15289, Museum of Comparative Zoology, Cambridge, Mass.

Coptotermes solomonensis is lighter colored and larger, and has a narrower, longer head and longer pronotum than *C. grandiceps* Snyder, from Tulagi Island, Solomon Islands.

Genus *Rhinotermes* Hagen

Subgenus *Schedorhinotermes* Silvestri

The subgenus *Schedorhinotermes* was established in 1909 by Silvestri for *Rhinotermes intermedius* Brauer, from Australia. Sixteen species are included, which occur only in the tropics of the Eastern Hemisphere—in Africa, the Philippines, Nicobar Isles, Malacca, Sumatra, Borneo (Sarawak), Celebes, Java, New Guinea, Bismark Archipelago, and Australia.

The winged adult has the clypeus less strongly projecting anteriorly than in *Rhinotermes*.

There are two types of soldiers, the large, mandibulate major soldier and the minor soldier with the relatively broad labrum nearly or quite as long as the mandibles, which have marginal teeth.

Rhinotermes (*Schedorhinotermes*) marjoriae, new species.

Winged adult.—Head yellow-brown, area of frontal gland distinct; sides parallel; posterior margin rounded; outline of head with eyes and labrum round; hairs few, scattered, long. Fontanelle hyaline, round, located on a line connecting ocelli posteriorly, or at beginning of raised area at front of head. Median groove running from fontanelle to labrum. Post-clypeus yellow, lighter colored than head, broader than long, convex anteriorly and somewhat raised as a nasutiform projection overhanging the labrum, not so prominent as in *Rhinotermes*. Labrum yellow, about as long as broad, arched and constricted anteriorly, placed nearly vertical.

Eyes black, suboval, prominent, projecting, close to lateral margin of head. Ocelli hyaline, suboval, projecting, separated from eyes by a distance about equal to the long diameter of an ocellus (closer in *translucens* Haviland).

Antenna yellow to light yellow-brown, with 19 or 20 segments; segments becoming longer and broader toward apex, with long hairs; third segment subclavate, longer than second or fourth; fourth shorter than second segment; last segment short, slender and subelliptical.

Pronotum yellow-brown, flat, slightly inclined anteriorly, twice as broad as long, not emarginate; sides roundly narrowing posteriorly; long hairs present.

Wings yellow; costal veins slightly darker; membrane irregularly and coarsely reticulate; in fore wing, median vein free, intermediate, but closer to cubitus than to subcosta, branching to apex of wing, with 4 to 7 branches or sub-branches; cubitus with 12 to 16 branches or sub-branches to lower margin of wing. Median separating into branches nearer middle of wing than in *translucens* Haviland.

Legs light yellow-brown, elongate, slender, with long hairs.

Abdomen yellow-brown; tergites with dense long hairs; cerci not prominent.

Measurements.—Length of entire winged adult, 12.5 mm.; length of entire deälated adult, 6+ mm. (shrunken?); length of head (posterior to tip of labrum), 1.8–1.85 mm.; length of head to anterior, 1.45 mm.; length of pronotum, 0.8 mm.; length of fore wing, 9.5 mm.; length of hind tibia, 2.2 mm.; diameter of eye (long diameter), 0.45 mm.; width of head (at eyes), 1.8–1.85 mm.; width of pronotum, 1.6 mm.; width of fore wing, 3.3 mm.

The pronotum and wing are smaller than in *translucens* Haviland.

Major Soldier.—Head yellow-brown, lighter than in *R.* (*S.*) *solomonensis* Snyder but darker than in *R.* (*S.*) *sanctae-crueis* Snyder, with scattered long hairs. Gula at middle more than half as wide as at widest part anteriorly.

Mandibles intermediate between those of *sanctae-crucis* and *solomonensis* (Fig. 3a).

Antenna with 16 segments; third subclavate, longer than second or fourth segment; fourth shorter than second segment.

Abdomen with tergites having short hairs and a row of long hairs at the base.

Measurements, Major Soldier.—Length of entire soldier, 4.5 mm.; length of head with mandibles, 2.4 mm.; length of head without mandibles (to anterior), 1.6 mm.; length of left mandible, 1.2 mm.; length of pronotum, 0.6 mm.; length of hind tibia, 1.5 mm.; width of head posteriorly, 1.65 mm.; width of head anteriorly, 1.2 mm.; height of head at middle, 1 mm.; width of pronotum, 1 to 1.1 mm.

Minor Soldier.—Head yellow-brown; transverse rows (at least three) of long hairs on head.

Mandibles with apex less incurved; teeth more parallel to the margin than in *solomonensis*.

Antenna with 15 segments; third slightly shorter and more slender than second or fourth segments.

Abdomen with tergites having denser hairs than in *solomonensis*.

Measurements, Minor Soldier.—Length of entire soldier; 3.4 mm.; length of head with mandibles, 1.6 mm.; length of head with labrum, 1.65 mm.; length of head without mandibles (to anterior), 1 mm.; length of left mandible, 0.65 mm.; length of labrum (together with post-clypeus), 0.7 mm.; length of pronotum, 0.45 mm.; length of hind tibia, 1.1 mm.; width of head (at antennal sockets where widest), 0.95 mm.; height of head at middle, 0.7 mm.; width of pronotum, 0.65 mm.

Type locality.—Ugi Island, Solomon Islands.

Described from a series of major and minor soldiers and winged adult collected with workers at the type locality by Dr. W. M. Mann, in July and August, 1916. Named in honor of my wife Marjorie.

Type, Major Soldier.—Cat. No. 15290, Museum of Comparative Zoology, Cambridge, Mass.; morphotypes, minor soldier and winged adult; paratypes in U. S. National Museum

Rhinotermes (S.) marjoriae is close to *translucens* Haviland, of Borneo, Java, Macassar, and German New Guinea. The shape and teeth of the mandibles of the soldiers appear to present excellent specific characters in *Schedorhinotermes* (Fig. 3).

Rhinotermes (*Schedorhinotermes*) sanctae-crucis, new species

Major Soldier.—Head yellow-brown, lighter colored than *R. (S.) solomonensis* Snyder, from the Solomon Islands, the head larger, with fairly numerous, scattered, long hairs. Gula at middle more than half as wide as at widest part anteriorly.

Mandibles more slender and elongate than in *solomonensis* (fig. 3*b* and *c*), the apex more slender and less incurved, and the marginal teeth farther from apex.

Antenna with 16 or 17 segments; third segment subclavate, much longer than second or fourth segment; fourth segment shorter than second.

Pronotum broader than in *solomonensis*.

Abdomen with denser hairs than in *solomonensis*.

Measurements, Major Soldier.—Length of entire soldier, 5 mm.; length

of head with mandibles, 2.5–2.6 mm.; length of head without mandibles (to anterior), 1.5 mm.; length of left mandible, 1.15 mm.; length of pronotum, 0.5 mm.; length of hind tibia, 1.4 mm.; width of head posteriorly, 1.7 mm.; width of head anteriorly, 1.1 mm.; height of head, 0.9 mm.; width of pronotum: 1 mm.

Rhinotermes (*S.*) *sanctae-crucis*, except for the differences noted, has a major soldier close to that of *solomonensis;* the head and mandibles present the greatest differences.

Minor Soldier.—Head yellow-brown, lighter colored than in *solomonensis*, smaller, but with denser long hairs, at least three transverse rows on head.

Mandibles with apex more elongate and slender and less incurved between tip and marginal teeth.

Antenna broken, 11+ segments; third segment slightly smaller than second or fourth segments.

Abdomen with denser hairs than in *solomonensis*.

Measurements, Minor Soldier.—Length of entire soldier, 3 mm.; length of head with mandibles, 1.4 mm.; length of head without mandibles (to anterior), 0.8 mm.; length of head with labrum, 1.45 mm.; length of left mandible, 0.6 mm.; length of labrum (together with post-clypeus), 0.65 mm.; length of pronotum, 0.35 mm.; length of hind tibia, 0.95 mm.; height of head at middle, 0.5 mm.; width of head (at antennal sockets, where widest), 0.8 mm.; width or pronotum, 0.55 mm.

Type locality.—Graciosa Bay, Santa Cruz Archipelago.

Described from two major soldiers and one minor soldier collected with workers at the type locality by Dr. W. M. Mann in July, 1916.

Type, Major Soldier.—Cat. No. 15291, Museum of Comparative Zoology; morphotype, minor soldier.

Rhinotermes (*S.*) *sanctae-crucis* has a lighter colored, smaller minor soldier than *solomonensis*, with differences in mandibles and hairier head.

Rhinotermes (*Schedorhinotermes*) solomonensis, new species.

Major Soldier.—Head light castaneous brown, area of frontal gland lighter colored; head quadrangular posteriorly; sides narrowing sharply and converging anteriorly, rounded at posterior margin. Fontanelle hyaline, round, distinct, opening flat, located on a line connecting antennal sockets; shallow groove running from fontanelle to tip of labrum, widening anteriorly, with margins darker colored than head; head with sparse, scattered, long hairs. Eye spot hyaline, suboval, near rim of depression around antennal socket. Labrum light yellow-brown, grooved medianly, tongue-shaped, longer than broad, the apical part bilobed, not reaching tip of mandibles, with fringe of short hairs and scattered, fairly long hairs. Gula at middle about half as wide as at widest point anteriorly.

Mandibles light castaneous brown at base, reddish brown at apex, broad at base, slender and incurved at apex, where pointed; left mandible with two subequal pointed marginal teeth about at middle; right mandible with one similar tooth located at a point between the two teeth on left mandible.

Antenna yellowish, with 16 segments; segments becoming longer and broader toward apex, with long hairs; third segment subclavate, longer than second or fourth segments; fourth shorter than second segment; last segment short, slender and subelliptical.

Pronotum light yellow-brown (margins darker), flat; anterior margin with sides converging anteriorly to median where convex; sides straightly narrow

posteriorly; posterior margin shallowly concave at middle; margins with scattered long hairs.

Legs tinged with yellow, slender, elongate, with long hairs.

Abdomen light yellow-brown (straw-colored); tergites with short hairs and a row of long hairs at base; cerci and styli prominent.

Measurements, Major Soldier.—Length of entire soldier, 4.5 mm.; length of head with mandibles, 2.35 mm.; length of head without mandibles (to anterior), 1.5 mm.; length of left mandible, 0.95 mm.; length of pronotum, 0.5 mm.; length of hind tibiae, 1.3 mm.; height of head at middle, 0.9 mm.; width of head (posteriorly), 1.5 mm.; width of head (anteriorly), 1 mm.; width of pronotum, 0.9 mm.

Minor Soldier.—Head yellow-brown (area of frontal gland lighter), slightly, arched; sides broadening from rounded posterior margin to antennal socket thence narrowing toward anterior margin. Fontanelle hyaline, round, on a line between antennae, a deep groove running from it to tip of labrum; epicranial suture sharply declined anteriorly; head with a row of long hairs anteriorly and posteriorly. Labrum light castaneous brown, slightly longer than mandibles, broadest posteriorly; sides slightly concave; median groove deep, broadening anteriorly; labrum widened at apex, where hyaline and bilobed, with a dense fringe of short hairs and longer hairs.

Mandibles yellow at base, reddish brown at apex, slender, elongate, pointed and incurved at apex; left mandible with two pointed marginal teeth on apical third; right mandible with one tooth located at a point between the teeth on left mandible.

Antenna light yellow-brown, with 15 segments, segments becoming longer and broader toward apex, with long hairs; third segment subclavate, short and narrow, shorter than second or fourth segments; fourth shorter than second segment; last segment short, slender, subelliptical.

Pronotum yellow-brown; anterior margin convex; posterior margin concave medianally; margins with long hairs.

Legs yellowish, slender, elongate, with long hairs.

Abdomen yellow-brown (straw-colored); tergites with short hairs and a row of long hairs at base; cerci prominent.

Measurements, Minor Soldier.—Length of entire soldier, 3.7 mm.; length of head with mandibles, 1.45–1.5 mm.; length of head without mandibles (to anterior), 0.9 mm.; length of head with labrum, 1.55–1.6 mm.; length of left mandible, 0.6 mm.; length of labrum (together with post-clypeus), 0.65 mm.; length of pronotum, 0.35–0.40 mm. length of hind tibia, 0.95 mm.; height of head at middle, 0.5 mm.; width of head (at antennal sockets, where widest), 0.8 mm.; width of pronotum, 0.55–0.6 mm.

Type locality.—Pamua, San Cristobal Island, Solomon Islands.

Described from a series of major and minor soldiers collected with workers at the type locality in August, 1916, by Dr. W. M. Mann; also minor soldiers collected by Mann at Auki, Malayta Island, Solomon Islands, May and June, 1916.

Type, Major Soldier.—Cat. No. 15292, Museum of Comparative Zoology, Cambridge, Mass.; morphotype, minor soldier, paratypes in the U. S. National Museum.

Rhinotermes (*S.*) *solomonensis* is smaller than most species in this subgenus.